

Underground Coal Mines

Proposed Rule: Mandatory Reporting of Greenhouse Gases



Under the proposed Mandatory Reporting of Greenhouse Gases (GHGs) rule, owners or operators of facilities that are subject to quarterly or more frequent sampling of mine ventilation systems by the Mine Safety and Health Administration (MSHA) would report emissions from underground coal mines. Owners or operators would collect emission data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

Owners or operators of underground coal mines also would be required to report emissions under 40 CFR part 98, subpart KK (Suppliers of Coal).

How Is This Source Category Defined?

Under the proposal, this source category consists of underground coal mines that are active or under development, including all underground coal mines that have operational pre-mining degasification systems. It includes both mines under development and mines categorized by MSHA as active (where coal is currently being produced or has been produced within the previous 90 days).

This source category consists of the following emission points:

- Each ventilation well or shaft.
- Each degasification system well or shaft, including degasification systems deployed before, during, or after mining operations.

Abandoned (closed) mines, surface coal mines, and post-coal mining activities are not included in this source category.

What GHGs Would Be Reported?

The proposal calls for underground coal mines to report:

- Methane (CH₄) emissions from each ventilation well or shafts, and CH₄ liberated from each degasification system deployed before, during, or after mining operations.
- Carbon dioxide (CO₂) emissions from coal mine gas CH₄ destruction where the gas is not a fuel input for energy generation or use.

In addition, each facility would report GHG emissions for other source categories for which calculation methods are provided in the rule. For example, facilities would report CO₂, nitrous oxide (N₂O), and CH₄ emissions from each stationary combustion unit on site by following the requirements of 40 CFR part 98, subpart C (General Stationary Fuel Combustion Sources). Please refer to the relevant information sheet for a summary of the proposal for calculating and reporting emissions from any other source categories at the facility.

How Would GHG Emissions Be Calculated?

Under the proposal, total annual CH₄ emissions would be estimated as the sum of quarterly CH₄ that is liberated from ventilation wells and shafts and degasification systems, less the quantity of CH₄ that is collected and destroyed.

- For ventilation wells and shafts, liberated CH₄ would be determined by quarterly measurements of flow rate and CH₄ concentration.
- For degasification systems, liberated CH₄ would be determined by continuously measuring flow rate and CH₄ concentration.
- CH₄ destroyed would be determined by measuring flow rate and CH₄ concentration of gas collected for destruction and applying a destruction efficiency (the lesser of 98 percent or the manufacturer's specified destruction efficiency).

CO₂ emissions from CH₄ destruction would be estimated by applying a factor to the estimate of CH₄ destroyed.

What Information Would Be Reported?

In addition to the information required by the General Provisions at 40 CFR 98.3(c), the proposal calls for underground coal mine owners or operators to report the following information annually:

- Volumetric flow rate, CH₄ concentration, and any CH₄ destruction for each ventilation system and degasification system.
- For each degasification system, dates in the reporting period where active ventilation of mining operations is taking place or when continuous monitoring equipment is not properly functioning.
- Quarterly CH₄ liberated and CH₄ emitted (net) from each ventilation well or shaft, and from each degasification system.
- Quarterly CO₂ emissions from onsite destruction of coal mine gas CH₄, where the gas is not a fuel input for energy generation or use.

For More Information

This series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the proposed rule. However, these information sheets are not intended to be a substitution for the rule. Visit EPA's Web site (www.epa.gov/climatechange/emissions/ghgrulemaking.html) for more information, including the proposed preamble and rule and additional information sheets on specific industries, or go to www.regulations.gov to access the rulemaking docket (EPA-HQ OAR-2008-0508). For questions that cannot be answered through the Web site or docket, call 1-877-GHG-1188.